

Begin

Reel # 458

Rannev, G.G.

S/130/62/000/002/005/005
A006/A101

AUTHORS: Khasin, G. A., Chikina, V. G., Bogdashkin, A. I., Rannev, G. G.,
Bruns, G. L., Vashchenko, Yu. I.

TITLE: A unit for the hot drawing of hard-to-deform steels

PERIODICAL: Metallurg, no. 2, 1962, 33 - 35

TEXT: At the Zlatoust Metallurgical Plant a unit for the hot drawing of hard-to-deform steels was developed and put into operation. It consists of a drawing mill, type I/750M, a tubular furnace to preheat the wire and a device for measuring the wire temperature during drawing. The wire is preheated in the tubular furnace by passage through molten lead and a charcoal layer. The capacity of the furnace is 75 kw, feed voltage 380 v, and the amount of lead 2,000 kg. The lead level remained almost unchanged after the calibration of over 100 tons high-speed steel; the wear of the draw plates is about 0.01 mm per 1 ton of wire. The wire temperature when leaving the draw plate is controlled by an infrared photo-electric pyrometer developed by NIIM, being able to measure temperatures within a range of 200 - 500°C. The pyrometer is combined with an electronic potentiometer ЭПП -120 (EPP-12). The least wire diameter during the measurement

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A unit for the hot drawing of hard-to-deform steels

S/130/62/000/002/005/005
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is 2 mm. The distance from the sensitive head to the wire surface is 5 - 10 mm. The device is power-supplied from a 220 v 50 cycle circuit through a ferro-resonance voltage stabilizer. The device operates on the principle of measuring the intensity of infrared radiation of the heated metal. Its block-circuit is given. The draw plate temperature is controlled and regulated by an induction power-frequency heater which is mounted on the draw-plate holder, in whose body a manometric thermometer is mounted. The introduction of the hot drawing method at the Zlatoust Plant yielded the following results: reduction of heat treatment and preparatory operations by a factor of 3 -4; reduction of technological production time; increase of the drawing-drum efficiency; reduction of annealing time by about 35.5 hours per one ton of steel; reliable operation of the unit and the possibility of using it in other plants. There are 3 figures.

ASSOCIATIONS: Zlatoustovskiy metallurgicheskiy zavod (Zlatoust Metallurgical Plant); Chelyabinskiy NIIM (Chelyabinsk NIIM)

Card 2/2

KHASIN, G.A.; CHIKINA, V.G.; BOGDASHKIN, A.I.; RANNEV, G.G.; BRUNS, G.L.;
VASHCHENKO, Yu.I.

Equipment for the hot drawing of deformation-resistant steel.
Metallurg 7 no.2:33-35 F '62. (MIRA 15:3)

1. Zlatoustovskiy metallurgicheskiy zavod i Chelyabinskiy NIIM.
(Drawing (Metalwork)--Equipment and supplies)

KOPYRIN, I.A.; RANNEV, G.G.; SMIRNOV, Yu.D.; CHERNOV, G.I.;
BOGATENKOV, V.F.; BOKOV, I.I.; TSIPUNOV, A.G.; RISPAL', K.N.;
AGARKOVA, N.A.; DAYKER, A.L.

Research by the Chelyabinsk Metallurgical Research Institute.
Stal' 22 no.7:604,620-621,667,670 J1 '62. (MIRA 15:7)
(Metallurgical research)

KH~~A~~SIN, G.A.; CHIKINA, V.G.; KASHIN, Yu.A.; Prinimali uchastiye: PETUKHOV,
S.P. [deceased]; VALENTOVA, R.I.; RANNEV, G.G.

Warm drawing of steel wire. Stal' 23 no.3:271-273 Mr '63.
(MIRA 16:5)

1. Zlatoustovskiy metallurgicheskiy zavod i Nauchno-issledovatel'skiy
institut metiznoy promyshlennosti.
(Wire drawing)

ANDREYUK, L.V.; PANNEV, G.G.; KOROTKEVICH, B.M.; NOVIKOV, M.N.;
DOLZHENKOV, F.Ye.

New developments in research. Stal' 24 no.8:730 Ag '64.
(MIRA 17:9)

VASIN, I.I., inzh.; VYSOKOVSKIY, S.N., inzh.; RANNEV, G.G., inzh.

Strain and pressure pickup. Priborostroenie no.1:28 Ja '63.
(MIRA 16:2)

(Strain gauges)

RANNEV, G.G.; SALIN, A.A., kand.tekhn.nauk; KOGOL', I.M.; LUKOVICH, L.G.

Automatic sampler and dispenser for saturated aqueous solutions.
Biol.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform.
no.9:33-36 '63. (MIRA 16:10)

RANNIK, G.I.; VODKOVANIK, S.N.; MIRENICH, S.M.; DORVIN, L.P.
POTAPOV, V.I.; SHTRITS, T.Y.

Using continuous operating dynamometers on strip mills.
Metallurg 10 no. 4:25-27 Je. '65. (MIRA 10:4)

1. Nauchno-issledovatel'skiy institut metallurgii i kachestvy
metallurgicheskoy zavod.

L 47167-56 EWT(d)/EWT(m)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l) IJP(c)

ACC NR: AR6000437

SOURCE CODE: UR/0137/65/000/009/DO05/DO05

JD/HW

AUTHORS: Vysokovskiy, S. N.; Rannev, G. G.; Sokolov, V. A.; Andreyuk, L. V.;
Merkulova, R. M.

44
B

TITLE: Energy and temperature parameters for rolling of thin sheets from different steels and alloys on stand "1500"

SOURCE: Ref. zh. Metallurgiya, Abs. 9D33

REF SOURCE: Sb. Teoriya i praktika metallurgii. Vyp. 7. Chelyabinsk, 1964, 90-100

TOPIC TAGS: metal rolling, metallurgic machinery, sheet metal, ^{test}stand / ^{test}1500, ^{test}stand

ABSTRACT: The energy and temperature parameters during hot rolling of sheets were investigated on a reversible 4-roller stand 1500. The metal pressure on the rollers, armature current, excitation current, mean square current of the motor, velocity of revolution of rollers, displacements of pressure bolts, thickness of sheets, and their temperature were determined. The results of the measurements are tabulated. Calculated results are compared with experimental data. Investigations have shown that it is possible in some cases to decrease the number of rolling operations without exceeding the maximum permissible pressure. In other cases, the redistribution of compressions between passages permitted a more uniform stand loading without exceeding the maximum permissible metal pressure on the rollers. 10 illustrations, 1 table. Bibliography of 5 citations. L. Chénova [Translation of abstract]

SUB CODE: 13, 11

Card 1/1 *eqh*

UDC: 621.771.001

OZEROV, R. P.; FYKIN, I. Ye.; KANNEV, N. V.

"Neutron-diffraction investigation of the crystal structure of lithium sulphate monohydrate, $\text{Li}_2\text{SO}_4\cdot\text{H}_2\text{O}$."

report submitted for 6th Gen Assembly, Intl Union of Crystallography, Rome, 9 Sep 63.

Karpov Inst Phys Chem, Moscow.

RANNEV, N.V.; OZEROV, R.P.

Neutron diffraction determination of the position of hydrogen atoms
in the structure of dicyanodiamide. Dokl. AN SSSR 155 no.6:
1415-1418 Ap '64. (MIRA 17:4)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. Predstavleno
akademikom N.V.Belovym.

OZEROV, R.P.; FYKIN, L.Ye.; RANNEV, N.V.; ZHDANOV, G.S.

Neutron diffraction study for the localization of hydrogen atoms in the structure of lithium sulfate monohydrate $\text{Li}_2\text{SO}_4 \cdot \text{H}_2\text{O}$. Dokl. AN SSSR 148 no.5:1069-1072 7 '63. (MIRA 16:3)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. Predstavleno akademikom N.V.Belovym.

(Neutron diffraction crystallography) (Lithium sulfate)
(Hydrogen)

OZEROV, R.P.; RANNEV, N.V.; PAKHOMOV, V.I.; REZ, I.S.; ZHDANOV, G.S.

Structure of KIO_3 at room temperature. Kristallografiia 7
no.4:620-622 J1-Ag '62. (MIRA 15:11)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova.
(Potassium iodide crystals)

ZHDANOV, G.S.; ZVONKOVA, Z.V.; RANDEV, N.V.

X-ray examination of the structure of lead diethyldithiocarbamate.
Kristallografiia 1 no.5:514-519 '56. (MLRA 10:2)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova.
(X-ray crystallography)
(Lead organic compounds)

RANNEY, N.V.

An x-ray structural study of lead diethyldithiocarbamate.
G. S. Zhdanov, Z. V. Zvonkova, and N. V. Ranney (U.S.S.R.
Kurnov Phys. Chem. Inst., Moscow). *Krystallografiya* 1,
614-19 (1956). Prismatic crystals of $(Et_2NCS)_2Pb$, ob-
tained by recrystn. from benzene, were monoclinic, of space
group $P2_1/c$, with cell dimensions $a = 9.55$, $b = 11.74$, $c =$
14.72 Å, and $\beta = 86^\circ$. $Z = 4$, $d_{calc} = 2.02$, and $d_{obs} =$
2.04. Certain crystals had c axes of 44.1 Å. OM and AM
Patterson projections led to the corresponding Fourier pro-
jections, which gave the at. coordinates (x, y, z): Pb 0.250,
0.112, 0; S_I 0.47, 0.16, 0.13; S_{II} 0.07, 0.29, 0.94; S_{III} 0.04,
0.16, 0.13; S_{IV} 0.42, 0.29, 0.94. C peaks were only imper-
fectly resolved. The Pb atom is pyramidally surrounded by
4 S atoms at distances 2.7 and 2.8 Å., the Pb-Pb distance
being 4.25 and the S-S distances 3.3 and 3.6 Å. The mixed-
character of the Pb-S bonds explains the increase in dipole
moment compared with the Zn and Ni analogs.

A. L. Markay

5.3200

1722
Sov. 10-31-24-40 19

AUTHORS: Shatenshteyn, A. I., Tolenov, A. M., Rikhs, V. I.

TITLE: Concerning the Mechanism of Hydrogen Exchange Between Aromatic Compounds and Bases (Factors of Partial Rate of Deuterioexchange Between Diphenyl Ether and Potassium Amide in Liquid Ammonia)

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 34, No. 6, p. 582-589 (USSR)

ABSTRACT: This paper describes the determination of factors of partial rate of exchange of o-, m-, and p-hydrogen atoms (P) of diphenyl ether and methoxybenzene with potassium amide in liquid ammonia at low temperatures. The apparatus and procedure used were described previously (A. I. Shatenshteyn, Ye. N. Zvyagintseva, DAN SSSR, 1:17, 1956, 1957; A. I. Shatenshteyn, ZhCKh, 13, 248, 1957). The following reagents were used: diphenyl ether, distilled under vacuum over sodium, mp 24.5, d₄²⁰ 1.0736, n_D²⁰ 1.5408; hexadeuteriodiphenyl ether was prepared by dissolving

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Concerning the Mechanism of Hydrogen
Exchange Between Aromatic Compounds and
Bases (Factors of Partial Rate of Deuterio-
exchange Between Diphenyl Ether and Potassium
Amide in Liquid Ammonia)

1961
507 79-40-4-40-110

diphenyl ether in liquid DNH, the deuteration of benzene
was done according to reaction $ND_2 + KND_2$; 2,4,6-tri-
deuteriomethoxybenzene was described previously (A. I.
Shatenshteyn, A. V. Vedeneyev, ZhKhG, 28, 2544, 1958).
It was found that there is a linear dependence between
the log of factors of partial rate of deuterioexchange
of o-hydrogen atoms in benzene derivatives and the nega-
tive log of ionization constants in water of acetic acid
derivatives with the same substituents. The rate of
isotopic exchange of o-hydrogen atoms in benzene deriva-
tives is determined by the acidity of the OH-group, which
depends on its polarization resulting from the inductive
effect of the substituent. The rate of hydrogen
exchange with organic bases is determined by the degree of
degree, determined by the degree of ion bond cleavage in
the abstraction of protons by bases, inert aromatic groups

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Concerning the Mechanism of Hydrogen
Exchange Between Aromatic Compounds and
Bases (Factors of Partial Rate of Deuterio-
exchange Between Diphenyl Ether and Potassium
Amide in Liquid Ammonia)

77896
SOV 79-30-2-46/78

6 tables; and 15 references. 2 U.S. 1 U.K., 2
German, 9 Soviet. The U.S. and U.K. references are
G. E. Hall, R. Piccolini, J. D. Roberts, J. Am. Chem.
Soc., 77, 4540 (1955); H. C. Brown, D. H. McDaniel,
O. Höffiger, in book, "Determination of Organic Struc-
ture by Physical Methods" ed. by A. E. Braude, F. C.
Nachod; D. Bryce-Smith, J. Chem. Soc., 1954, 2079;
D. Bryce-Smith, V. Gold, D. P. N. Sainelli, J. Chem.
Soc., 1954, 2743.

ASSOCIATION: I. Ya. Karpov Institute of Physical Chemistry, Fiziko-
khimicheskiy institut imeni I. Ya. Karpova,

SUBMITTED: February 6, 1959

Card 3/3

L 10750-63

EWB(q)/EWT(m)/BDS--AFFTC/ASD--JD

ACCESSION NR: AP3001952

S/0226/63/003/003/0025/0029

AUTHOR: Skorokhod, V. V.; Ranneva, G. O.

TITLE: Investigation of sintering of Ni powders prepared by different methods

SOURCE: Poroshkovaya metallurgiya, no. 3, 1963, 25-29

TOPIC TAGS: carbonyl Ni powder, electrolytic Ni powder, sintering behavior, viscosity, linear shrinkage, interparticle contact, porosity, lattice distortion

ABSTRACT: An investigation of the kinetics of sintering 99.5%-pure electrolytic and 99.9%-pure carbonyl Ni powder at temperatures equal to or less than $0.56T_m$, °K (T_m = melting temperature) has been made in an effort to determine the effect of physicochemical properties of powders produced by different methods. The average particle size was 24.5μ for the electrolytic powder and 9.7μ for the carbonyl powder. Specimens $5 \times 5 \times 10$ mm were compacted with a porosity of 36-39% and sintered in hydrogen at 300, 400, 500, 600, and 700°C for 8 hr. Significant differences in sintering behavior were observed in the powders tested. The carbonyl powder was considerably more active than the electrolytic powder. The linear shrinkage of both powders increased with increasing

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ACCESSION NR: AP3001952

0

temperature and prolonged holding, but in electrolytic powder after 440 min at 400, 500, 600, and 700C, it amounted to approximately 0.34, 0.38, 0.50, and 0.93%, respectively; the corresponding figures for carbonyl powder were approximately 1.40, 3.80, 6.00, and 3.70%. The growth of the interparticle contact areas, measured as λ_{pr}/λ_k (where λ_{pr} is the electrical conductivity of compacts reduced to zero porosity and λ_k is the electrical conductivity of solid material), followed the same pattern as that of linear shrinkage and after sintering for 440 min at 300, 400, 500, 600, and 700C amounted to approximately 0.30, 0.40, 0.58, 0.80, and 0.92%, respectively, for electrolytic powder and approximately 0.73, 0.85, 0.90, 0.94, and 0.95%, respectively, for carbonyl powder. Porosity of the carbonyl nickel compacts decreased much more rapidly than that of the electrolytic nickel compacts (see Fig. 1 of Enclosure). The experimentally determined values of the coefficient of viscosity for electrolytic Ni at 700C did not differ significantly from the value calculated from the Nabarro formula; for carbonyl Ni, however, the calculated value was almost four orders higher, which indicates that carbonyl Ni has much higher diffusion activity than electrolytic Ni. The crystal lattice of electrolytic Ni was found to be more distorted than that of carbonyl Ni, which shows that lattice distortions have no effect on the sintering activity of powders. The only explanation for

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the higher activity of carbonyl powder appears to be a highly developed network of macrodefects. Orig. art. has: 5 figures, 2 formulas, and 2 tables.

ASSOCIATION: Institut metallokeramiki i spetsialny*kh splavov AN USSR
(Institute of Powder Metallurgy and Special Alloys, AN USSR)

SUBMITTED: 22Dec62

DATE ACQ: 11Jul63

ENCL: 01

SUB CODE: ML

NO REF SOV: 005

OTHER: COJ

Card 3/43

SHATENSHTEYN, A.I.; SHAPIRO, I.O.; YAKUSHIN, P.S.; ISAYEVA, G.G.; PANKOVA, Yu.I.

Comparison of the acidity of organic compounds in dimethylsulfoxide, ammonia, and cyclohexylamine based on the variation of hydrogen exchange rates. Kin. i kat. 5 no.4:752-753 JI-Ag '64.

(MIRA 17:11)

1. Fiziko-khimicheskiy institut imeni Karpova.

SHATENSHTEYN, A.I.; RANNEVA, Yu.I.; KOVALENKO, T.T.

Deuterium exchange method of studying the electron acceptor and electron donor properties of substituents in aromatic rings. Zhur.ob.khim. 32 no.3:967-974 Mr '62. (MIRA 15:3)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova.
(Substitution (Chemistry)) (Deuterium)

SHATENSHTEYN, A.I.; RANNEVA, Yu.I.

Factors of the partial rate of deuterium exchange in dimethylaniline with potassium amide solution in liquid ammonia, and the mechanism of basic deuterium exchange. Zhur.ob.khim. 31 no.5:1423-1431 My '61. (MIRA 14:5)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova.
(Deuterium) (Potassium amide) (Aniline)

CZECHOSLOVAKIA / Chemical Technology. Chemical Prod- H-25
ucts and Their Application. Fats and
Oils. Waxes. Soaps. Detergents.
Flotation Agents.

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 2660.

Author : Ranny, M., Kyslinger, V.

Inst : ~~Not given~~

Title : Alkyl Aryl Sulfonates -- the New Agents for Laun-
dry. Part II. The Action and Properties of Alkyl
Aryl Sulfonate Detergents.

Orig Pub: Prumysl potraviny, 1956, 7, No 10, 450-455,
No 11, 491-497.

Abstract: A short review is given on the development in pro-
duction and the properties of new alkyl aryl sul-
fonate detergents obtained by the condensation of
benzene with chlorinated petroleum hydrocarbons,

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BRUTUS, L., kand. ekon. nauk, glav. red.; ANTONS, R., red.; POLISINSKI, U., red.;
KAGANOVITS, I., kand. ekon. nauk, red.; KULL, E., kand. ekon.
nauk, red.; MUREL, R., red.; RANNIK, E., red.; VINT, E.,
kand. ekon. nauk, red.; RIIKOJA, L., red.; KOHU, H., tekhn.
red.

[Economic life of Soviet Estonia, 1940-1960] Noukogude Eesti
majandus, 1940-1960. Tallinn, Eesti Riiklik Kirjastus,
1960. 478 p. (MIRA 16:6)

1. Eesti NSV Teaduste Akadeemia. Majanduse Instituut. 2. Chlen-
korrespondent AN Estonskoy SSR (for Antons).
(Estonia--Economic conditions)

ACCESSION NR: AT4042304

S/0000/63/003/000/0271/0279

AUTHOR: Mezhiburd, V.I., Parts, R.R., Rannu, L. Kh. Teearu, V. A.

TITLE: A magnetic system for low-power DC high-pressure pumps

SOURCE: Soveshchaniye po teoreticheskoy i prikladnoy magnitnoy gidrodinamike. 3d, Riga, 1962. Voprosy* magnitnoy gidrodinamiki (Problems in magnetic hydrodynamics); doklady* soveshchaniya, v. 3. Riga, Izd-vo AN LatSSR, 1963, 271-279

TOPIC TAGS: pump, direct current pump, high pressure pump, low power pump, electromagnetic pump, pump magnetic system

ABSTRACT: The article deals with the problem of designing a magnetic system for low-power DC high-pressure pumps (on the order of 7 kg/cm^2 and above with a productivity up to $100 \text{ cm}^3/\text{sec}$). Since these pumps make use of a helical channel, their magnetic system most frequently also consists of bodies of rotation (Figures 1 & 2 of the Enclosure). The advantages and disadvantages of the helical-channel magnetic system and the U-shaped system are discussed and it is pointed out that the latter may be considered as consisting of two simpler magnetic systems (See Figure 1). For this reason, greater attention is paid to this system in the present article. The geometry of the magnetic system in the air

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gap is determined and formulas are presented for establishing the length of the polar core L_p . The authors note that in carrying out a verification calculation of a magnetic system, it is also necessary to determine the magnetic dispersion flows and the magnetic conductances. Formulas are given which are applicable to the system shown in Figure 1. It is shown that, once the magnetic flows or conductances have been found, it is a simple task to calculate the dispersion factor and also to determine the magnetic flows in the individual sections of a particular segment of the magnetic circuit. This provides a basis for determining the magnetic inductances in the sections and by means of the latter, in turn, the calculated intensity of the magnetic field may be found, through the use of the basic magnetization curve of the material of which the corresponding segment of the magnetic circuit is manufactured. From this point on, the calculation of the magnetic system of the pump is quite similar to that of the magnetic system of DC electric motors. For the purpose of providing some idea of the order of magnitude of values that might be anticipated, a table is given in the article showing certain data with respect to the magnetic system (See Figure 1) of an experimental direct-current electromagnetic pump developing a pressure of 2 kg/cm^2 with a productivity of $10 \text{ cm}^3/\text{sec}$. Orig. art. has: 1 table, 3 figures and 38 formulas.

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ACCESSION NR: AT4042304

ASSOCIATION: none

SUBMITTED: 04Dec63

ENCL: 02

SUB CODE: IE

NO REF SOV: 004

OTHER: 000

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Card

ACCESSION NR: AT4042304

ENCLOSURE: 01

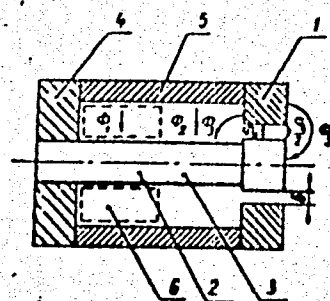


Fig. 1. Magnetic system of low-power DC pump with a helical channel: 1 - external polar terminal; 2 - internal polar terminal; 3 - polar core; 4 - yoke; 5 - external polar core (in the form of a hollow cylinder); 6 - driving coil.

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ACCESSION NR: AT4042304

ENCLOSURE: 02

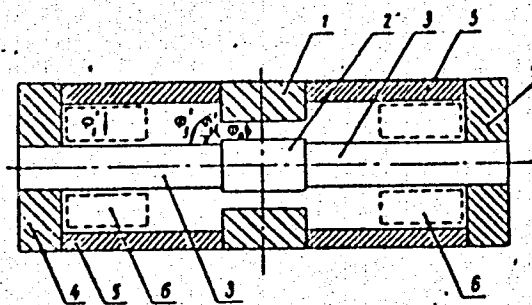


Fig. 2. U-shaped cylindrical magnetic system of a low-power DC pump with a helical channel: 1 - external polar terminal; 2 - internal polar terminal; 3 - polar core; 4 - yoke; 5 - external polar core; 6 - driving coil (the axis of the bodies of rotation is horizontal).

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ACC NR: AP6034908

SOURCE CODE: UR/0382/66/000/002/0135/0138

AUTHOR: Vol'dek, A. I.; Rannu, L. Kh.; Yanes, Kh. I.

ORG: none

TITLE: On certain new orientations in the development of special windings for devices with a traveling magnetic field.

SOURCE: Magnitnaya gidrodinamika, no. 2, 1966, 135-138

TOPIC TAGS: magnetic induction, winding, magnetic field, MHD generator

ABSTRACT: Special windings are required for devices of this kind, such as liquid-metal induction pumps, MHD induction generators with a liquid-metal working fluid, steel-furnace melt stirrers, rotators of molten metal in tube-casting installations, etc. because this involves substantial linear current loads and often requires internal water-cooling of the windings. In this connection, the article describes the design and specifications of more suitable windings which are beginning to be introduced. They have the shape of flat concentric coils, which greatly simplifies their fabrication and installation and enhances their operating reliability. Under normal conditions their performance is inferior to that of conventional helical windings, but

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UDC: 621.313.39:538.4

ACC NR: AP6034908

once the nonmagnetic clearance between two ferromagnetic cores increases to a considerable extent, and thus necessitates a marked increase in the linear current load of the windings (as is the case with the electromagnetic induction pump and other similar devices with a traveling or rotating magnetic field) these new flat concentric coil-shaped windings outperform their conventional counterparts and display such additional advantages as greater compactness of the inductor and more or less complete elimination of nonuniformity of coil spacing owing to the shortening of this spacing. Orig. art. has: 1 table.

SUB CODE: 09, 13/ SUBM DATE: 17Dec65/ ORIG REF: 004

Cord 2/2

ACCESSION NR: AT4042305

S/0000/63/003/000/0281/0288

AUTHOR: Mezhiburd, V. I.; R. R. Parts; L. Kh. Rannu; M. M. Saar; V. A. Teearu

TITLE: Design of the channels of low-power high-pressure DC pumps

SOURCE: Soveshchaniye po teoreticheskoy i prikladnoy magnitnoy gidrodinamike. 3d, Riga, 1962. Voprosy* magnitnoy gidrodinamiki (Problems in magnetic hydrodynamics); doklady* soveshchaniya, v. 3. Riga, Izd-vo AN LatSSR, 1963, 281-288.

TOPIC TAGS: direct current pump, high pressure pump, low power pump, electro-magnetic pump, pump channel design, helical pump

ABSTRACT: The authors discuss the various reasons why, when increasing the working pressure of a pump, a channel of linear form is not suitable. The need for a transition from a channel of linear form to one of some other, more rational, configuration is determined primarily by the working pressure and secondarily by the ratio between the working pressure and the productivity of the pump with the hydraulic power remaining constant. The helical channel form is considered at length. It is shown that, by virtue of its special features, the energy specifications of a helical channel are better than those of a linear channel of identical dimensions. The authors analyze some of the peculiarities inherent in

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the electromagnetic processes which occur in the helical channel. It is demonstrated that the basic peculiarities of the helical pump are due to the closed structural design of the circular gap, the radial direction of the fundamental field in the gap, the dependence of the induction of the fundamental field on the radius, the presence of centrifugal forces in the liquid metal and the presence of an angle of inclination of the helix, which gives rise to a deviation of the velocity vector of the metal from the tangential direction. An equivalent circuit for a helical channel is constructed, on the basis of which expressions are derived from the working current component normal to the side walls of the channel, the tangential component of the current in the channel (along the helix), and certain other factors. In the final section of the paper, the authors take up the problem of the "wall - liquid metal" contact resistance. Details are given of a series of tests conducted to study this problem. The fundamental results of these tests may be summarized as follows: 1. Extreme instability of r_k is observed, particularly for oxide and pure-steel surfaces; 2. The contact resistance possesses attributes of a semiconductive nature; 3. The magnitude of the contact resistance fluctuates from $0.9 \cdot 10^{-6} \text{ ohm} \cdot \text{cm}^2$ for tin-plated steel surfaces to $1 \cdot 10^{-1} \text{ ohm} \cdot \text{cm}^2$ for severely oxidized surfaces; 4. In devices in which there is no special

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ACCESSION NR: AT4042305

requirement for purity of the mercury, tinning the steel surfaces practically leads to the total disappearance of contact resistance; 5. The contact resistance of surfaces which have not been tinned is unstable in time. Orig. art. has: 3 figures and 20 formulas.

ASSOCIATION: None

SUBMITTED: 04Dec63

ENCL: 00

SUB CODE: IE

NO REF SOV: 005

OTHER: 001

3/3

Card

RANNY, Mojmir, inz., C.Sc.; NOVAK, Jan, inz.; PRACHAR, Josef

Alkylolamides of fat acids. Prum potravin 14 no.4:211-212 Ap '63.

1. Vyzkumny ustav tukoveho prumyslu, Rakovnik.

RANNY, M.

Electrokinetic behavior of synthetic detergents in the area of critical concentrations. In German. Coll.Cz.Chem. 24 no.9:3090-3098 S '59. (BEA I 9:5)

1. Entwicklungslaboratorium fur synthetische Waschmittel, Rakovana, Rakovnik.

(Cleaning compounds)

RANNY, M. KYSLINGER, V.

"Alkylsulfonate , our new cleaning compounds. Pt. 1. Chemistry and technology.
p. 533."

PRUMYSL POTRAVIN. Praha, Czechoslovakia. Vol. 6, no. 11. 1955.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, unclas

RANNY, M.; KYSLINGER, V.

RANNY, M.; KYSLINGER, V. Alkylarysulfonates, our new detergents. II. Effectiveness
and properties of alkylarysulfonate detergents. (Conclusion)
p. 491

Vol. 7, no. 11, 1956
PRUMYSL POTRAVIN
TECHNOLOGY
Praha, Czechoslovakia

So: East European Accession, Vol. 6, No. 2, 1957

RANOV, A.I.; SMIRNOVA, O.M.

Acute reduction of whooping cough incidence in Kurgan Province. Zhur.
mikrobiol., epid. i immun. 40 no. 12: 114-115 D '63.

(MIRA 17:12)

1. Iz Kurganskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.

LOGINOVSKIY, G. Ye.; RANOV, A. I.

Liquidation of malaria morbidity in Kurgan Province. Med. paraz.
i paraz. bol. no.2:186-189 '62. (MIRA 15:7)

1. Iz Kurganskoy oblastnoy sanitarno-epidemiologicheskoy stantsii
(glavnyy vrach V. I. Sokol'skiy)

(KUGAN PROVINCE--MALARIA--PREVENTION)

RAHOV, A.I. (Kurgan)

Amateur theaters and "cleanliness carnivals" in the history of
sanitary-educational work. Sov. zdrav. 22 no.7:28-30 '63.

(MIRA 16:12)

1. Iz Kurganskoy oblastnoy sanitarno-epidemiologicheskoy stan-
tsii (glavnyy vrach V.I.Sokol'skiy).

РАНОВ, А.И.

Conditions for liquidating malaria as an epidemic disease in Kurgan Province. Med.paraz. i paraz.bol.supplement to no.1:29 '57.
(MIRA 11:1)

1. Iz Kurganskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.
(KURGAN PROVINCE--MALARIA)

RANOV, A.I.

All province conference for workers in the sanitation and
epidemiological service of Kurgan Province. Sov.zdrav. 15 no.3:
63-64 My-Je '56. (MLRA 9:8)
(KURGAN PROVINCE--PUBLIC HEALTH)

RAIKY, V. A.

"O svyazyakh kul'tur paleolita Sredney Azii i nekotorykh stran zarubezhnogo Vostoka."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

RANOV, V.A.

The archaeological study of the Tajikistan caves. Spor. trud. Tadzh.
fil. Geog. ob-va SSSR no.2:19-30 '61. (MIRA 14:11)
(Tajikistan--Caves) (Tajikistan--Archaeology)

RANOV, V.A.; SIDOROV, L.F.

Variations in the natural conditions of the Pamirs in the Holocene.
Dokl. AN Tadzh. SSR 3 no.3:21-24 '60. (MIRA 16:2)

1. Institut istorii, arkheologii i etnografii AN Tadzhikskoy SSR
i Pamirskaya baza AN Tadzhikskoy SSR. Predstavleno akademikom
AN Tadzhikskoy SSR A.P. Nedzvetskim.
(Pamirs--Paleoclimatology)

1964, V. 1.

Petroglyph traces on the Korteke cliff. 127 Vses geog ob-va
96 no. 1:67-69 Jg-F '64. (MIRA 17:5)

BUTOMO, S.V.; RANOV, V.A.; SIDOROV, L.F.; SHILKINA, I.A.

Paleogeographic results of the exploration of an alpine Stone-age
camp site in the Pamirs. Dokl. AN SSSR 146 no.6:1380-1382
O '62. (MIRA 15:10)

1. Leningradskoye otdeleniye Instituta arkheologii AN SSSR,
Pamirskaya baza AN Tadzhikskoy SSR i Botanicheskiy institut im.
V.L. Komarova AN SSSR. Predstavleno akademikom D.V. Nalivkinym.
(Pamirs—Paleogeography)

RANOYEVICH, M., prof. (Yugoslaviya, Belgrad); MEYMAN, L.R., prof.
(Leningrad)

Concerning M.Ranoevich's article "Rationalizing of equations of an electromagnetic field" and L.R.Meiman's article "Relationships between unit values in rationalized and nonrationalized systems of equations of an electromagnetic field." Elektrichestvo no.11:91-93 N '62. (MIRA 15:11)

1. Chlen-korrespondent AN SSSR (for Neyman).
(Electric fields) (Ranoevich, M.) (Meiman, L.R.)

AUTHOR: Ranoyević, M., Professor (Beograd, SOV/105-59-6-4/28
Yugoslavia)

TITLE: The Rationalization of the Electromagnetic Field Equations.
(Ratsionalizatsiya uravneniy elektromagnitnogo polya)

PERIODICAL: Elektrichestvo, 1959, Nr 6, pp 18 - 22 (USSR)

ABSTRACT: The protracted discussion on the problem of the rationalization of the electromagnetic field equations was caused by a number of misunderstandings, which may be ascribed to the fact that the interpretation of the two systems of equations has never been carried out with sufficient lucidity. In both sets of equations operations are carried out with symbols of physical quantities, units and numerical values, whereas the nature of the operations has not been explained by means of the symbols. The rationalization of the equations can be achieved by an alteration of the quantities. This method, however, exhibits serious shortcomings, as the physical meaning of the quantities is changed and no definite relationship between the old and the new quantities and units is established. The rationalization of the equations by an alteration of the quantities is not possible.

Card 1/2

The Rationalization of the Electromagnetic Field
Equations

SOV/105-59-6-4/28

tion of the units proceeds as follows: The existence is acknowledged only of rationalized quantities, which correspond to the concept of short-range action, and the non-rationalized quantities are abolished, as with the acception of this theory they lose their physical meaning. The rationalized quantities are given the names of non-rationalized quantities, whereas the latter are excluded from use. The non-rationalized quantities are also excluded, and in their place non-coherent units of the rationalized system are introduced, which are given the names of the old units, if such existed. The old equations are considered to represent equations between numerical values, which give numerical values of rationalized quantities, expressed by non-coherent units. The non-coherent units are defined in the same manner as the non-rationalized units, in which case the quantities, which occur in these definitions, have the meaning of rationalized quantities.

Card 2/2

RANOW, S.

Activities of the Circles of the Polish Association of Construction Engineers and Technicians at the Institute of Organization and Mechanization of Building. p.182
(PRZEGLAD BUDOWLANY, Vol. 28, No. 4, Apr. 1956, Warsaw, Poland)

SO: Monthly List of East European Accessions (FPAL) LC, Vol. 6, No. 9, Sept. 1957, Uncl.

HUNGARY

RANSCHBURG, Jenő—of Chair Pathology and Psychology of the College for Training of Teachers of Mentally Retarded Children; Head Mrs Gyula TILLES (A Gyónypedagógiai Tanszékvezető Polikola Kör- és Lelektani Tan-
szék)

"Imagination Tests of Blind Children in Sound Recognition Situations"
(Preliminary Report)

Budapest, Magyar Pszichológiai Szemle, Vol 19, No 4, 1963, pp 439-450

Abstract (Author's English summary modified): In order to investigate the imaginative faculty of blind children ten short (30 sec) sound stories containing sounds and musical elements were composed and played before the test child who afterwards was told to write or relate a radio play founded on the sound score. Thus a double task was imposed on the child: to recognize the objective content of the sounds - activity of the memory and to compose a story of them - activity of the imaginative power.

Most tested children compiled the stories only on the basis of

14

RANSCHBURG, Jeno

"Factors affecting the development of school class communities" by Mrs. Hedvig Just nee Kery. Reviewed by Jeno Ranschburg. Magyar pszichol szemle 21 no. 1: 128-130 '64.

RANSCHBURG, Jeno

"Scientific thinking and scientific writing" by M.S.Peterson.
Reviewed by Jeno Ranschburg. Magyar pszichol szemle 20 no.3:488-
491 '63.

RAMSDORF, J.

Sources of vehicle noises and means of their reduction inside the vehicle body.

p. 251, (Automobil) Vol. 1, No. 8, Aug. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. VOL. - 7, NO. 1, Jan. 1958

RANS DORF, J.
CZECHOSLOVAKIA/Acoustics - Noise

J-3

Abs Jour : Ref Zhur - Fizika, No 4, 1958, No 9071

Author : Ransdorf, J.

Inst : Not Given

Title : Sources of Noise in Truck Bodies and Certain Acoustical
Factors Contributing to Its Reduction

Orig Pub : Automobil (CSR), 1957, 1, No 8, 251-253

Abstract : Examination of the principal sources of noise and description
of the results of experiments on the reduction of noise in
the cabins of several types of trucks.

Card : 1/1

RANSDORF, J.

Contribution to the development of antivibration coatings. p. 103

Ceskoslovenska vedecka technika spolecnost pro zdatovni techniku a
vzduchotechniku, Praha, Czechoslovakia, Vol. 4, 1959.

Monthly list of East European Accessions, (EEAI) LC, Vol. 8, No. 7, July 1959.
Uncl.

RANSDOFF, J.; NEMEC, J.

Present problems of protection against the noise. p. 107

ZDRAVOTNI TECHNIKA A VZDUCHOTECHNIKA. Praha, Czechoslovakia, Vol. 2, no. 3, 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 3, No. 9, September 1959
Uncl.

RANSDORF, J.: NEMEC, J.

Antivibration coatings and their use. P 521

STROJIRENSTVI (Ministerstvo tezkého strojirenstvi, Ministerstvo vsobecného strojirenstvi) Praha, Czechoslovakia Vol. 9, no. 7 July 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 9, no. 2, Feb. 1960

Uncl.

L 31768-66 EWP(j)/EWP(k)/EWP(h)/I/EWP(l)/EWP(v) IJP(c) RM
 ACC NR: AP6021701 SOURCE CODE: CZ/0032/66/016/001/0045/0049
 AUTHOR: Ransdorf, J.--Ransdorf, Yu. (Engineer; Candidate of sciences) 4/8
 ORG: State Research Institute of Machine Building, Prague (Statni vyzkumny ustav pro stavbu stroju) 19
 TITLE: Reducing machine noise through the wider application of plastics
 SOURCE: Strojirenstvi, v. 16, no. 1, 1966, 45-49
 TOPIC TAGS: acoustic property, plastic, acoustic noise
 ABSTRACT: The acoustical properties of plastics are discussed from the viewpoint of their use in curbing machine noise. A general explanation is given of the advantages that can be expected from plastics. Several formulas are derived on the basis of physical laws. Plastics are compared with conventional materials, and the differences are underlined that must be taken into consideration in designing. Orig. art. has: 4 figures, 16 formulas, and 2 tables. [Based on author's Eng. abst.] [JPRS]
 SUB CODE: 11, 20 / SUBM DATE: none / ORIG REF: 005 / SOV REF: 001
 OTH REF: 003
 Card 1/1 PB UDC: 628.517.2:621.8-758.34:679.5:621

RANSDORF, J.

Reduction of vibration in the body of a car by antivibration coatings. p. 304.

AUTOMOBIL. (Ministerstvo automobiloveho prumyslu a zemedeliskych stroju)
Praha, Czechoslovakia, Vol. 3, No. 9, Sept. 1959.

Monthly List of East European Accessions, (EEAI), LC, Vol. 8, No. 12, Dec. 1959.
Uncl.

RANSDORF, J., inz.

Damping of sound waves in elastic foundations of vibrating machines.
Strojirenstvi 13 no.6:409-414 Je '63.

1. Statni vyakumny ustav tepelne techniky, Praha.

RANSDORF, J. - Strojirenstvi - Vol. 5, no. 2, Feb. 1955.

Noise emanating from oil engines. p. 148.

Power needed for pressing joints and the strength of pressed joints. (Supplement)
p. 1

SO: Monthly list of East European Accessions, (REAL), LG, Vol. 4, No. 9, Sept. 1955
Uncl.

RAIBORAF, J.

Methods of measuring automobile noise.

p. 219 (Automobil) Vol. 1, No. 7, July 1957. Praha, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LG, VOL. 7, NO. 1, Jan. 1958

ZISMAN, L.M., inzh.; BOBROV, I.I., inzh.; DOLGOFILOV, V.M., inzh.; RANSEVICH,
B.N., inzh.

Central voltage regulator of a network for group excitation regulation
of generators. Elek. sta. 34 no.11:93-94 N '63. (MIRA 17:2)

BOGDANOV, V.M., inst.; MIKHAYLOV, A.P., inst.; RANDEVICH, E.N., inst.

Decreasing of residual voltage in generators. Elec. sta. 30
no.2178 F '65. (MIRA 1814)

DOLGOPOLOV, V.M., inzh.; ZISMAN, L.M., inzh.; MEYSHTADT, I.S., inzh.;
RAMSEVICH, B.N., inzh.; URIN, V.D., inzh.

Operation of the automatic operator of a multiple-unit hydro-
electric power station with long-term frequency deviations
from the nominal value. Elek. sta. 35 no.2:35-37 F '64.

(MIRA 17:6)

CA

21

Determination of the individual sulfur compounds in
brown coal. H. N. Ranshil and N. A. Khalkova.
Khim. Tverdogo Topliva 3, No. 9, 73 0(1931). This
coal contains 8-10% S. Sulfide S was detd. by leaching
up the sulfides with HCl in the presence of Zn. Org. S
constitutes about 80-90% of the total of S in the above
coal.
A. A. Boethling

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM STV 02174

SEARCHED INDEXED

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

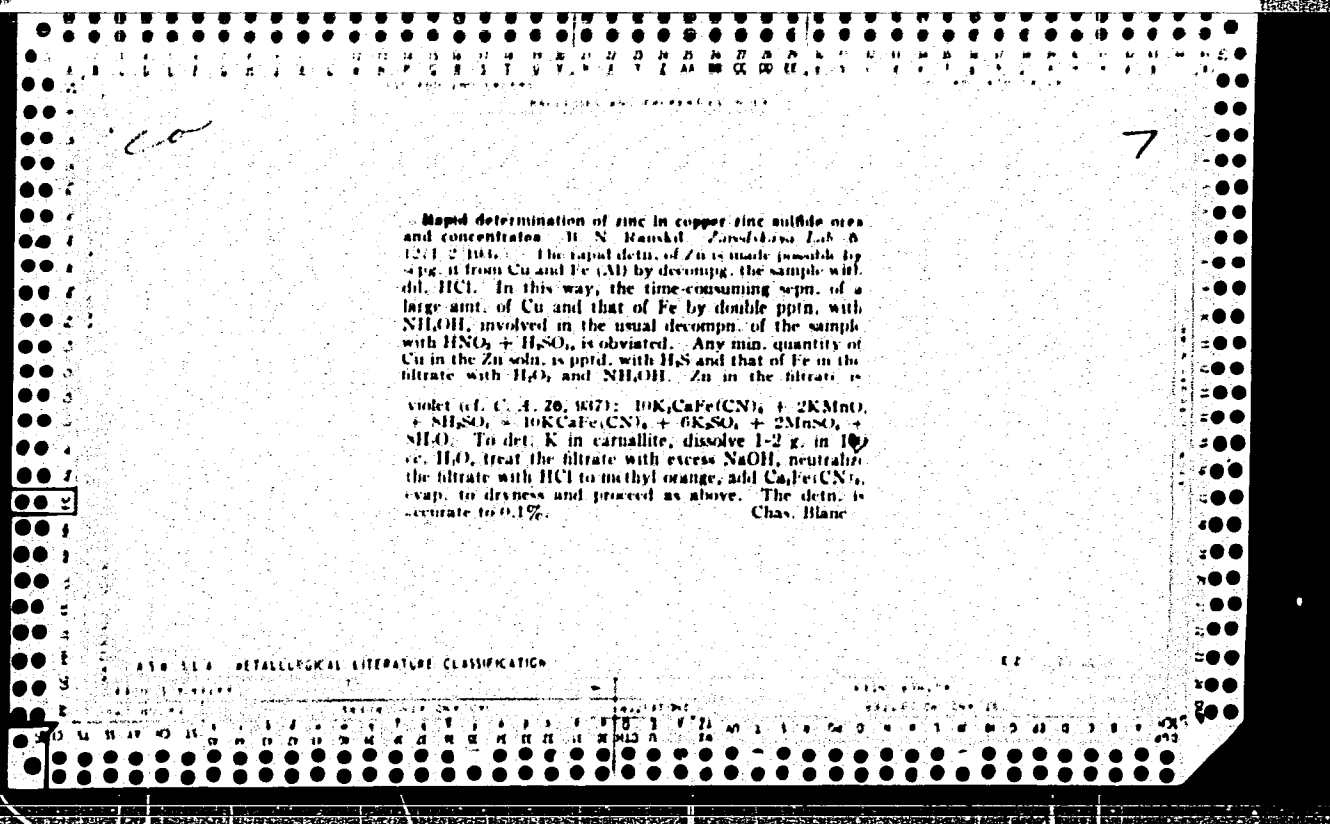
RECOVERY OF POTASSIUM IODIDE

✓

Recovery of potassium iodide. B. N. Ranskid. Zashchita. Lab. 4, 714 7 (1935). The procedure for the recovery of KI and NaI from the waste solns. of the iodometric detn. of Cu is based on filtering off CuI , neutralizing the filtrate with solid CaO and BaCO_3 , filtering off CaSO_4 and BaSO_4 , evapg. the filtrate to dryness and leaching out KI and NaI.

7

Chas. Blanc



1ST AND 2ND CODES		PROCESS AND PROPERTIES INDEX		3RD AND 4TH CODES	
BC B-I-L Fluid determination of zinc in zinc-copper sulphide ores and their concentrates. E. N. RAYNES (Metall. Lab., 1957, 8, 1271-1272).— 2-4 g. of material are heated for 15 min. with 60 ml. of 80% HCl, the solution is saturated with H₂S to ppt. Cu, the vol. is made up to 100 ml., the solution filtered, 2-3 drops of H₂O₂ and excess of aq. NH₃ are added to 80 ml. of filtrate, and the solution is boiled and filtered. The filtrate + washings are made acid with H₂SO₄, 2 drops of K₂Cr₂O₇ solution are added, and Zn in the solution is titrated with standard K₂Fe(CN)₆ containing K₃Fe(CN)₆. Alternatively, Cu is pptd. as Cu₂C₂O₄ by evaporating the reduced ammoniacal solution with C₂H₅. R. T.					
AS 8-11 A METALLURGICAL LITERATURE CLASSIFICATION					

1ST AND 2ND ORDERS		PROCESSING AND PROPERTIES INDEX		3RD AND 4TH ORDERS	
<i>con</i> Rapid determination of zinc in copper-zinc sulfide ores and concentrates. H. N. Ranskil. <i>Zapiski Akad. Nauk SSSR</i> 1971 2 (1937). The rapid detn. of Zn is made possible by sepg. it from Cu and Fe (Al) by decomp. the sample with dil. HCl. In this way, the time-consuming sepn. of a large amt. of Cu and that of Fe by double pptn. with NH_4OH, involved in the usual decompn. of the sample with $\text{HNO}_3 + \text{H}_2\text{SO}_4$, is obviated. Any min. quantity of Cu in the Zn soln. is pptd. with H_2S and that of Fe in the filtrate with H_2O and NH_4OH. Zn in the filtrate is titrated with $\text{K}_2\text{Fe}(\text{CN})_6 + \text{K}_2\text{Fe}(\text{CN})_6$ by the Conc-and-Dil. method (C. J. 21, 872). Chas. Blanc					
ASB-11A METALLURGICAL LITERATURE CLASSIFICATION					
SOURCE INFORMATION		SUBJECT INDEX		CROSS-REFERENCE	
100000 00		100000 00 000 000		100000 000 000 000	

1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									
PROCESSES AND PROPERTIES INDEX																			
BC C-1 See also: Metallurgical classification of copper in solution concentration of copper in solution. A. T. Schenck and R. W. Smith, J. M., J. M. J. 1964-1965. Concentration solu- tion in water. The main feature of the apparatus is a built-in vessel which is filled with the solution and the standard solutions through a side tube. J. J. R.																			
A 10-314 METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									

A rapid photocolorimetric method for determining copper in the products of copper and zinc flotation. A. T. Shumlin and B. M. Ivanishvili. *Zashchita Lab. S. N. 10-11, 1054-6 (1959); Khim. Referat. Zhur.* 1959, No. 4, 54. The proposed app. differs slightly from the app. of Davydov (C. A. 21, 335²) and is more suitable for rapid mass detns. The app. was used for detg. Cu by the NH_3 method in the products of Cu and Zn flotation. The photometer LRT-1 was used for the "photocopy." The photocurrent was measured with a galvanometer and an 8-12 v. and 20-mill amp. was used for the source of current. For the analysis of ores and concentrates dissolve 3 g. of the sample in a mixt. of HNO_3 and HCl , evap. with H_2SO_4 , dissolve the residue in 100 cc. of water, add 70 cc. of NH_4OH and bring the vol. to 220 cc. Filter the soln. from $\text{Fe}(\text{OH})_3$. Add 1% NH_4OH to the bulb, regulate the intensity of the light so that the galvanometer indicates 0% of Cu and fill the bulb with the soln. under investigation. Two photocolorimetric detns. can be made in one min. The expl. error is 3-5% (relative) as compared with results obtained by the iodometric detn. W. R. Henn

DROBCHENKO, A.T.; SMIRNOV, V.I.; MAZANIK, V.N.; TIKHONOV, A.I.; RANSKIY,
B.N.; KHARAEV, V.A.

Retreatment of slags from the smelting of secondary copper con-
taining raw materials. TSvet. met. 37 no.12:23-25 D '64
(MIRA 18:2)

DROBCHENKO, A.T.; MAZANIK, V.N.; RANSKIY, B.N.; KHARAIN, V.A.; SMIRNOV, V.I.;
TIKHONOV, A.I.

Regularities of the reduction process for liquid slags from copper
smelting. TSvet. met. 36 no.12:15-18 " '63. (MIRA 17:2)

RANSKIY, P.

Production is the main field of our work. NTO 5 no.7:46-48
Jl '63. (MIRA 16:8)

1. Chlen soveta nauchno-tekhnicheskogo obshchestva Kirovgrad-
skogo medeplavil'nogo kombinata.
(Kirovograd—Copper—Metallurgy)

GARENSKIKH, A.D.; RANSKIY, B.N.

Nickel in the process of crude copper smelting. TSvet. met. 35
no.5:44-46 My '62. (MIRA 16:5)
(Copper—Metallurgy) (Nickel—Metallurgy)

BOLKOV, D.A.; RANSKIY, B.N.

Depressant action of cyanide and zinc sulfate in the selective
flotation cycle of a collective concentrate. TSvet. met. 35
no.3:11-15 Mr '62. (MIRA 15%)
(Flotation--Equipment and supplies)

RANSKIY, B.N.; ARTEMOV, V.A.

Work practices of the Levikha Cementation Plant. TSvet.
met. 34 no.11:81-82 N '61. (MIRA 14:11)
(Levikha region--Cementation (Metallurgy))

GARENSEYIKH, A.D.; DROBCHENKO, A.T.; RANSKIY, B.N.; SHELUDYAKOV, L.N.

Recovery from waste slag by cementation. Vest, AN Kazakh SSR 17
no. 5:27-30 My '61. (MIRA 14:6)

(Slag)

AUTHOR: Ranskiy, B. N. SOV/32-24-7-7/65

TITLE: The Determination of Rhenium in Products Containing Molybdenum
(Opredeleniye reniya v produktakh, soderzhashchikh molibden)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 7, pp. 803 - 804
(USSR)

ABSTRACT: A colorimetric method was used in the investigation of molybdenites, which was recommended by the Institute of Rare Metals. This method is based upon the property of rhenium to color solutions containing thiocyanates of alkali metals, hydrochloric acid and tin chloride with a yellow tinge. As molybdenum disturbs this process, methods had to be found which permit to transform the sulfides into oxides without a loss of rhenium and a sufficiently rapid separation of the molybdenum from rhenium. First the weighed sample of the concentrate was annealed with calcium oxyhydrate, by which procedure molybdenum passes over to the calcium molybdate, which is only little soluble in water. Calcium nitrate was used as oxidizing agent. The course of analysis is described. When substances are used, the molybdenum content of which considerably surpasses that of rhenium, another method of determination must

Card 1/2

SOV/32-24-7-7/65

The Determination of Rhenium in Products Containing Molybdenum

be employed, as the coloring by the molybdenum complex predominates, which fact impedes the determination of rhenium. A method is described, which is based upon an absorption of molybdenum by sulfocarbon. Soft coal from Karaganda with a grain size ranging from 1 to 2 mm and with a specific weight of 0,26 g/cm³ was used. The experiments were performed at a pH = 4,5 - 5,0, a complete absorption of molybdenum being attained, whereas the lesser absorption of rhenium was taken into account by throwing away the first portion of the filtrate. The results of the determinations are given in a table, error limits ranging from 15 to 20% and 7 to 15% rel., respectively being mentioned. There are 1 table and 2 references, 2 of which are Soviet.

ASSOCIATION: Balkhashskiy medeplavil'nyy zavod (Balkhash Copper Works)

Card 2/2

RANSKIY, B.N.

Determination of rhenium in molybdenum-containing materials.
Zav. lab. 24 no. 7:803-804 '58.

(MIRA 11:?)

1. Balkhashskiy medepлавil'nyy zavod.
(Rhenium--Analysis)
(Molybdenum compounds)

USSR/Analysis of Inorganic Substances

G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19636

Author : B. N. Ranskiy

Inst :

Title : Concerning Inaccuracy of Methods of GOST Analysis

Orig Pub: Zavod. Laboratoriya, 1956, 22 No 9, 1130 - 1134

Abstract: At the determination of oil in concentrates by calcination at 500° , the obtained results are not reproducible, because a portion of the flotation oils is converted into coke and remains in the sample as hard C (when treated with acids, C transforms into colloidal form and colors the solution brown). The temperature

Card 1/3

- 115 -

USSR/Analysis of Inorganic substances

G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19636

accelerate the analysis, Mo should be determined in a weighed sample of raw concentrates after its calcination at 450° for the elimination of flotation oils and the oxidation of S^{2-} accompanied with the burning out of S; at the following resolution of the weighed sample, the solution will not contain SO_4^{2-} .

Card 3/3

- 117 -

BODILOVSKIY, V.G.; RANSKIY, Ye.G., inzh., retsenzent; USTINSKIY, A.A., kand. tekhn. nauk, retsenzent; NOTIKAS, M.B., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Vacuum devices and transistors in automatic control, remote control, and communication systems] Elektrovakuumnye i poluprovodnikovye pribory v ustroistvakh avtomatiki, telemekhaniki i sviazi. Moskva, Transzheldorizdat, 1963. 391 p.
(MIRA 17:2)

KEPKA, M., inz.; PUNCOCHAR, Zd., inz.; VESELY, J., inz.; KECLIK, V., inz.;
BECVAR, J., inz.; RANT, Pavel, inz.; CHVOJKA, Jan, inz.; SOMMER, B.,
inz. KALIVODA, A., inz.; HRBEK, A.

Information on metallurgy. Hut listy 18 no.3:207-223 Mr '63.

RANT, Zoran, prof. dr. inz. (Ljubljana); BIZJAK, Aleksander; SAREC, Janez

Thermodynamic diagrams for the systems $H_2O-(NH_4)_2SO_4$ and H_2O-NH_4Cl .
Stroj vest 8 no.4/5:95-98 0 '62.

1. Fakulteta za strojninstvo v Ljubljani. 2. Clan urednistva,
"Strojniski vestnik" (for Rant).

RANT, Zoran, dr.sc., mech.eng., prof.

The Faculty of Mechanical Engineering in Ljubljana has become independent. Stroj vest 7 no.1:1 Ja '61. (EEAI 10:9)

1. Dean of Faculty for Mechanical Engineering, University of Ljubljana; clan urednistva, "Strojniski vestnik".

(Mechanical engineering) (Ljubljana)

RANT, Zoran, prof. dr. inz. (Ljubljana)

"Kinetics of gas reactions" by E. Cremer and M. Pahl. Reviewed
by Z. Rant. Stroj vest 8 no.3:79 Je '62.

1. Clan Urednistva, "Strojniski vestnik".

(RANT, Zoran, prof.dr.inz.

"The enthalpic diagrams for the mass-production contact processes" by J.Algermissen. Reviewed by Z.Rant. Stroj vest 3 no.1/2:32 Ap '62.

1. Clan Urednistva, "Strojniski vestnik."

RAM, Zoran, prof.dr.inz. (Ljubljana)

Thermodynamics of combustion processes. Article dedicated to Prof. Dr. F.Bosnjakovic, engineer, on the occasion of his sixtieth anniversary. Stroj vest 8 no.1/2:1-5 Ap '62.

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